

Big potential in small technology



PAM EGGEMEIER / THE JOURNAL-STANDARD

Andrew Honegger fine-tunes his micro-manufacturing machinery and tools Wednesday at the kickoff for the EIGERlab manufacturing research and development center in Rockford. Honegger, a graduate student at the University of Illinois, is working at the lab as part of his mechanical engineering studies.

Rockford kicks off EIGERlab research and development center



Manzullo

BY PAM EGGEMEIER
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ROCKFORD — After losing more than 13,000 manufacturing jobs since 2001, Rockford proclaimed on Wednesday it was back in a big way — or perhaps a small way would be more precise.

Congressman Don Manzullo and several other dignitaries were at the Ingersoll Machine Tool Company campus to kick off the EIGERlab research and development center, a

project that aims to make Rockford a world leader in advanced manufacturing technologies, including micro-manufacturing.

"We've let the world know we're not going to lie down and play dead because of unemployment," Manzullo said, "Rebirth, Renaissance — call it what you want — but EIGERlab is the new emblem of advanced manufacturing and Rockford is back."

The EIGERlab Initiative was born in fall 2002, a collaborative

effort between Manzullo, area educators, manufacturers and community leaders. State and federal government has supported the program, with \$5 million coming from the Department of Defense and the Small Business Administration. Ingersoll, EIGERlab investing partner and landlord, received a \$2 million grant for micro-machining research from the U.S. Commerce

EIGERLAB

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Department. An additional \$1.6 million for capital equipment purchases was given to the City of Rockford through the state's Opportunity Returns economic development program.

Jack Lavin, chairman of the Illinois Department of Commerce and Economic Opportunity, and Assistant U.S. Commerce Secretary Brett Palmer, attended the festivities and said this project is a great example of the importance of collaboration.

"Public-private partnership is the key to creating more success stories like this," Lavin said. "Manufacturing is still the backbone of the local economy and the modernization of industrial technology will create a wealth of opportunities here and help Rockford compete globally."

A byproduct of the manufacturing downturn has been the paring down of research and development budgets. Institutions of higher learning are helping to pick up the slack and play a key role in this project. Partners include the University of Illinois,

Northwestern University, Northern Illinois University, and Rock Valley College. Scientists from Alion Science and Technology are also working in the lab.

Dr. John Peters, NIU president, said universities must understand the important role higher education plays in economic development.

"Strong, vibrant regional economies have the ability to use universities not only to educate its workforce but to create jobs and partner with industry and government to transfer research discoveries into salable products," Peters said.

NIU has received \$2.5 million to develop its Rapid Optimization of Commercial Knowledge program, as part of the lab's work for the Pentagon in developing the nation's small combat systems of the future.

All three universities are partnering with Alion to research micro-machining processes, giving students unique study opportunities in the field. Andrew Honegger of Edwardsville is a graduate

student studying mechanical engineering at University of Illinois. He said he has always enjoyed building things, and now his aim is to make them as small as possible.

"When I was accepted into grad school, you have to pick a project and there is a lot of drive in miniaturized manufacturing," Honegger said. "It is a great opportunity to be involved in this type of research."

Honegger was showing off a small tabletop machine that makes a gear — one that easily fits on the upper left corner of a quarter. He said that small parts with small tools is not a new concept, the innovation lies in the smaller machinery.

"This can also make three-dimensional parts that we couldn't produce before with silicon," Honegger said.

The allure of tiny parts produced with small machinery is the cost savings that come with more efficient production. As many manufacturing processes become outdated, it becomes more difficult to maintain a competitive advantage. One of the end results

is more outsourcing to low-wage competition overseas.

"We are a conduit between industry, education and government to create jobs of value in the region," said Tom McDunn, EIGERlab director. "We hope to also commercialize this research and keep the jobs here."

The lab wants to be accessible and will have a small business incubator where people can bring their ideas to fruition with the help of the lab's financial and research resources.

Other partners include EIGERlab are the Illinois Coalition, Rockford Area Ventures, W.A. Whitney, Hamilton Sundstrand, Caterpillar, Boeing and Rockford Council of 100. Many other area manufacturers are also involved in the project. Approximately 30 people will work at the lab on a weekly basis. It is estimated that special events and programs will attract about 1,500 participants in its first year of operation.

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